

**DERWENT-ACC-NO:** 1993-339796

**DERWENT-WEEK:** 199343

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**TITLE:** UV curable resin compsn. for metal coating, ink etc. - comprising mono- and poly:functional (meth)acrylate, and (meth)acrylated and epoxy-(meth)acrylate both modified with phosphoric acid

**PATENT-ASSIGNEE:** INK TEC KK[INKTN]

**PRIORITY-DATA:** 1992JP-0051908 (March 10, 1992)

**PATENT-FAMILY:**

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 05247155 A	September 24, 1993	N/A	006	C08F 299/02

**APPLICATION-DATA:**

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 05247155A	N/A	1992JP-0051908	March 10, 1992

**INT-CL (IPC):** C08F002/50, C08F299/02

**ABSTRACTED-PUB-NO:** JP 05247155A

**BASIC-ABSTRACT:**

UV-Curable resin compsn. comprises (a) 10-70 wt.% of phosphoric-acid-modified epoxy (meth)acrylate; (b) 0-20 wt.% of phosphoric-acid-modified (meth)acrylate; (c) 10-70 wt.% of monofunctional (meth)acrylate; (d) 5-20 wt.% of polyfunctional (meth)acrylate; (e) 1-15 wt.% of photopolymerisation initiator and (f) 0-1 wt.% of polymerisation inhibitor.

The cpd. (d) is, e.g., dipentaerythritol hexa(meth)acrylate, trimethylolpropane tri(meth)acrylate. The cpd. (c) includes hydroxyalkyl (meth)acrylate, isobornyl (meth)acrylate or phenoxyethyl (meth)acrylate. The compsn. may contain 0.01-50 wt.% pigment and fillers.

**USE/ADVANTAGE** - The resin compsn. forms a film with good electrical insulating properties and adhesion, esp. to metal plate. The compsn. is used for coating material, resist ink or marking ink.

In an example, 45 pts. wt. of phosphoric-acid-modified epoxy acrylate; 3 pts. wt. of ethyleneoxide-modified phosphoryl acrylate; 45 pts. wt. of isobornyl acrylate; 10 pts. wt. of trimethylolpropane triacrylate; 7 pts. wt. of 1-hydroxycyclohexyl phenyl ketone; and 0.01 pt. wt. of hydroquinone are mixed to give the resin compsns. (viscosity is 500 cps at 25 deg.C). The compsn. is coated on a steel plate and is irradiated with a lamp to give a cured film (pencil hardness is 3H, electrical insulating properties is  $3.0 \times 10$  power(12) and good adhesiveness.

**CHOSEN-DRAWING:** Dwg.0/0

**DERWENT-CLASS:** A14 A82 A97 G02

**CPI-** A08-C01; A08-C06; A08-C07; A10-E07B; A10-E20; G02-A02G; G02-A04A; G02-A05;  
**CODES:** G06-D04; G06-F03B; G06-F03C; G06-F03D;